



Lightning Learning: Sickle Cell Crisis



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East Midlands Emergency Medicine Educational Media

STOP!

Acute sickle cell crisis⁽¹⁾ is when the sickling of blood cells blocks vessels by causing endothelial damage.

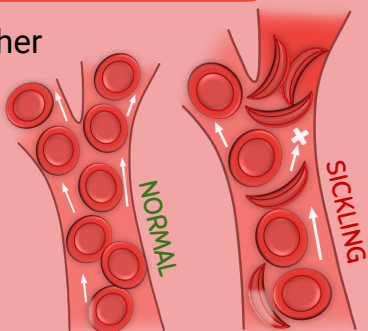
The result is a vaso-occlusive crisis which causes pain and organ ischaemia. **If missed, this can lead to lifelong disabilities – even death.**

In ED the main goal is to prevent complications of sickle cell crisis (see *LOOK* section for more examples).

It is imperative to achieve *effective pain control* by starting analgesia within 30 minutes of hospitalisation.

PRECIPITATING FACTORS⁽²⁾

- Cold weather
- Infection
- Stress
- Hypoxia
- Drugs



LOOK

COMPLICATIONS^(3,4)

Acute chest syndrome: can be difficult to distinguish between pneumonia and vaso-occlusive infarct. *Consider CXR, ABG, blood transfusion and invasive ventilatory support.*

Abdominal crisis: think splenic and hepatic sequestration. *Consider CT abdomen.*

Stroke: can occur in adults and children. Need to distinguish between other causes (e.g. *meningoencephalitis*). *Consider CT head.*

Avascular necrosis: Bone and joint pain, commonly in the hip. *Consider x-ray of limbs.*

Priapism: prompt recognition required, urological emergency. *Consider urgent aspiration.*

Aplastic crisis: Parvovirus B19, causes a life-threatening drop in Hb level. *Consider red cell transfusion.*

LEARN

TREATMENT⁽⁵⁾

Refer to local hospital guidance:

- Oxygen (15L via non-rebreathe mask)
- PROMPT Analgesia: e.g. morphine, manage every 30 minutes until pain settles (*refer to patient's haematology pain management plan if available*)
- IV fluids
- Consider IV Antibiotics if suspecting underlying infection as the trigger
- Keep the patient warm (e.g. *warmed fluids/bair hugger*)
- Refer to hematology team for admission

REFERENCES

1. <http://bit.ly/2XLzu0U> (NICE)
2. <http://bit.ly/2DkUJ0c> (LITFL)
3. <http://bit.ly/2OS6GzU> (UpToDate)
4. <http://bit.ly/2qQpUxw> (UpToDate)
5. <http://bit.ly/2rsbDHo> (UHL)